1851MNRAS..11R.125.

VICTORIA.

Liverpool. Equatoreal. (Mr. Hartnup.)

	Greenwich M.T.	R.A.	N.P.D.	Comp—Obs. R.A.	Comp—Obs. N.P.D.	Star of Comp.
1851.	h m s	h m s	° ′ ″	s	″	
Feb. 8	7 21 54·1	1 18 5·32	80 6 30·6	−0·33	+5·1	B.A.C. 288
20	7 58 24·1	1 37 58·38	78 39 54·3	0·09	6·4	— 488
23	7 18 40·2	1 42 58·44	78 18 20·7	0·08	5·7	— —
Mar. 3	8 19 12·5	1 56 39·65	77 20 5·9	−0·07	+7·4	— —

The parallax and computed places were deduced from M. Yvon Villarceau's ephemeris, published in the *Monthly Notices*, vol. xi., No. 3.

The following are the assumed *mean* places of the stars of comparison for 1851·0, derived from the Greenwich 12-year Catalogue.

	R.A.	N.P.D.
	h m s	° ′ ″
B.A.C. 288	0 55 12·86	82 54 47·81
— 488	1 29 12·33	78 37 19·45

The following results are derived by comparison of the *Observations*, p. 54, with the ephemeris of M. Villarceau:—

	Comp—Obs. R.A.	Comp—Obs. N.P.D.
	s	″
1851, Jan. 12	−0·59	+7·4
— — 22	−0·49	+4·2
— — 23	−0·32	+7·0

EGERIA.

Liverpool. Equatoreal. (Mr. Hartnup.)

	Greenwich M.T.	R.A.	Log. $\frac{p}{P}$	N.P.D.	Log. $\frac{q}{P}$	Star of Comp.
1851.	h m s	h m s		° ′ ″		
Feb. 8	8 5 8·6	2 6 27·11	+8·320	72 32 5·8	−9·7831	B.A.C. 650
	8 20 7·3	27·95	8·365	0·0	9·7876	— —
23	8 9 3·0	2 25 30·02	8·545	70 13 65·3	9·8056	— 707
	8 39 1·3	31·81	8·578	50·0	9·8217	— —
Mar. 3	9 9 51·3	2 36 57·41	8·596	68 59 30·9	9·8763	— 808
	9 24 50·3	58·42	+8·602	24·7	−9·8834	— —

The observations are corrected for refraction.

The corrections to be applied for parallax, in time and arc, are represented by p and q. P is the equatoreal horizontal parallax.

The following assumed *mean* places of the stars of comparison for 1851·0 are derived from the Greenwich 12-year Catalogue:—

	R.A.	N.P.D.
	h m s	° ′ ″
B.A.C. 650	1 59 35·50	72 40 56·86
— 707	2 9 50·73	70 47 26·13
— 808	2 30 21·83	68 41 7·80

1851MNRAS..11R.125.

DURHAM. Fraunhofer Equatoreal. (Mr. R. C. Carrington.)

1850.	Green. M.T. h m s	App. R.A. h m s	Log $\frac{p}{P}$	App. N.P.D ° ′ ″	Log $\frac{q}{P}$	No. of Comps. R.A.	No. of Comps. N.P.D.	Set.
Nov. 21	7 15 48·3	1 43 30·49	−8·381	81 18 76·7	−9·866	24	8	1
	12 39 21·1	19·20	+8·425	34·3	9·869	18	6	2
27	12 21 42·9	39 9·14	+8·445	80 58 11·8	9·869	24	8	3
28	11 9 24·5	38 35·08	+8·271	54 32·0	9·859	24	8	4
Dec. 6	7 20 35·3	34 54·11	−8·126	20 80·0	9·852	8	8	5
	10 8 1·9	51·70	+8·165	44·5	9·852	20	7	6
8	11 28 21·2	34 12·52	+8·435	10 55·8	9·864	23	8	7
9	7 8 27·3	33 59·47	−8·120	80 6 57·2	9·850	23	8	8
	11 25 23·7	55·99	+8·434	7·3	9·864	15	5	9
12	8 52 54·8	33 19·03	+7·805	79 51 17·0	9·845	24	8	10
19	12 5 37·5	32 53·00	+8·551	10 57·8	9·877	15	5	11
20	8 30 3·2	32 55·77	+7·900	79 5 45·6	9·839	24	8	12
21	10 49 14·4	33 1·37	+8·462	78 59 4·4	9·860	16	8	13
23	8 40 53·2	33 15·58	+8·073	46 67·1	9·839	24	8	14
	10 37 22·7	16·36	+8·455	34·2	9·858	18	6	15
26	8 14 20·3	33 50·41	+7·961	27 47·9	9·835	24	8	16
27	9 59 32·7	34 6·43	+8·408	20 44·2	9·850	24	8	17
28	10 15 50·1	1 34 23·17	+8·451	78 13 54·1	−9·853	18	6	18

"P is the equatoreal hour parallax in seconds of arc, and *p* and *q* are the corrections in seconds of time and arc respectively."

Assumed *Apparent* Places of the Stars of Comparison.

Name and Authority.	App. R.A. h m s	App. N.P.D. ° ′ ″	Set.
Weisse, 1^h, 743	1 41 19·77	81 28 9·6	1
— 801	44 45·90	81 9 8·8	2
Anonymous, 9·10 mag.	41 23·45	81 3 38·8	3
Weisse, 1^h, 756	42 25·67	80 55 55·1	4
— 633	34 43·77	80 30 34·1	5
— 526	30 25·24	80 15 3·5	6
— 526	30 25·23	80 15 3·6	7
— 555 *	31 34·47	80 5 8·4	8
B.A.C. 542, Green. 12-y^r Cat.	39 14·97	79 54 17·3	9
— — —	39 14·95	79 54 17·4	10
Anonymous, 9th mag.	33 43·33	79 7 32·9	11
— —	33 43·32	79 7 33·0	12
Weisse, 1^h, 569	32 25·51	78 52 41·0	13
B.A.C. 490, Green. 12-y^r Cat.	29 44·79	78 41 3·9	14
— 488, — —	29 12·00	78 37 23·8	15
— 488, — —	29 11·96	78 37 24·0	16
Weisse, 1^h, 539	31 15·73	78 19 19·0	17
— —	1 31 15·72	78 19 19·0	18

1851MNRAS..11..127R

Nov. 21. Hazy. Planet considered to be of 10th magnitude.

Nov. 27. Weisse, 1^h, 718 was missing. The place of the star used depends upon Weisse, 1^h, 756. It has a small companion n. p.

Dec. 9. Set 8. Weisse, 1^h, 555 is in error in right ascension. After comparing it with No. 526, I have diminished its right ascension by $14^s·00$. The north polar distance agreed with the catalogue.

Dec. 12. Planet dimmed by haze, but the measures good.

Dec. 19. Moonlight nearly overpowering the planet. I could hardly afford to illuminate the wires sufficiently.

Dec. 20 and 21. The same circumstances.

Dec. 23. The second set on this night is the better one; the telescope's unsteadiness giving trouble in getting set 14.

Dec. 27. Patches of vapour, but the planet brighter and better seen than of late.

Dec. 28. High wind. Several other comparisons made and rejected on examination.

HAMBURG. Equatoreal. (M. C. Rümker.)

1851.	Hamburg M.T. h m s	Observed R.A. ° ′ ″	Observed Decl. ° ′ ″	No. Obs.
Feb. 6	8 29 46·2	31 2 14·6	+17 9 32·9	7
21	8 17 54·6	35 41 24·0	19 27 18·3	12
23	7 28 13·3	36 21 34·8	19 45 34·0	21
24	8 29 24·0	36 43 3·8	19 55 4·1	5
26	8 36 46·2	37 25 3·6	20 13 37·0	14
27	8 4 33·7	37 45 48·0	20 22 38·2	14
Mar. 2	7 54 25·6	38 50 44·9	+20 50 35·8	13

Corrected for refraction, but not for parallax.

Apparent Places of the Stars of Comparison from Lalande, Bessel, &c.

	Appar. R.A. h m s	*Appar.* Decl. ° ′ ″		*Appar.* R.A. h m s	*Appar.* Decl. ° ′ ″
Feb. 6	2 7 11·70	+17 13 11·4	Feb. 26	2 29 9·09	+19 55 24·5
21	2 22 16·60	19 11 20·7	27	2 29 9·19	20 30 25·4
23	25 6·12	19 46 37·2		32 4·25	32 34·5
24	24 48·83	19 47 40·8		32 12·27	34 39·5
26	2 28 18·79	+20 2 48·1	Mar. 2	2 36 19·17	+20 58 46·4

Elements. By M. George Rümker.

	° ′ ″	
M =	299 13 1·67	Jan. 0·0, 1851, G.M. Time
π	118 48 7·17	Mean Equinox, Jan. 0, 1851
☊	43 17 3·51	
I	16 33 2·13	
ϕ	4 57 13·50	
Log a	0·4114765	
Log μ	2·9327918	

These elements are computed from the Altona observation of Nov. 13, and the Hamburgh observations of Dec. 31 and March 2.

They represent the middle observation, thus,

Calculation—Observation = −0″·10 in Longitude
— — = −0·03 in Latitude.